

IN THE CLAIMS

1-75. (Canceled)

76. (New) A device for in-situ measurement and recording of at least one parameter in a process, said device comprising:

a sensor for detecting said parameter and converting to a sensor output; and
a data logger coupled to said sensor for receiving and logging said sensor output;
a communication module for communicating said sensor output; and
means for attaching said sensor and said data logger to an object such that said sensor and said data logger form a portable single unit.

77. (New) The device of claim 76 wherein said data logger comprises a timestamping module for recording a timestamp with said sensor output.

78. (New) The device of claim 76 wherein said communication module comprises a transmitter and a receiver.

79. (New) The device of claim 76 wherein said communication module comprises an RF (radio frequency) communication module.

80. (New) The device of claim 76 further comprising a display device.

81. (New) The device of claim 76 wherein said sensor is configured to detect a presence of electrostatic field.

82. (New) The device of claim 81 wherein said sensor is configured to measure a magnitude of said electrostatic field.

83. (New) The device of claim 82 wherein said sensor is configured to detect a change in said electrostatic field.

84. (New) The device of claim 76 wherein said sensor is configured to detect an electrostatic discharge.

85. (New) The device of claim 84 wherein said sensor is configured to measure a magnitude of said electrostatic discharge.

86. (New) The device of claim 76 wherein said data logger comprises an analog to digital converter (ADC) to convert said sensor output into digital data.

87. (New) The device of claim 86 further comprising signal processing circuitry coupled to said sensor for processing said sensor output.

88. (New) The device of claim 87 further comprising means for communicating said sensor output.

89. (New) The device of claim 88 wherein said means for communicating comprises a transmitter and a receiver.

90. (New) The device of claim 87 further comprising an RF (radio frequency) communication module.

91. (New) The device of claim 76, wherein said portable single unit moves through at least one of a manufacturing, storage, and transit process while attached to the object.

92. (New) A device for in-situ measurement and recording of at least one parameter in a process, said device comprising:

means for detecting said parameter and converting to a sensor output; and

means for receiving and logging said sensor output; and

means for attaching said means for detecting and said means for receiving to an object as a portable single unit.

93. (New) The device of claim 92 wherein said means for receiving and logging comprises a timestamping module for recording a timestamp with said sensor output.

94. (New) The device of claim 92, wherein said portable single unit moves through at least one of a manufacturing, storage, and transit process while attached to the object.

95. (New) A device for monitoring environmental parameters comprising:
an electrostatic sensor for detecting electrostatic field and converting said electrostatic field into a first output;

an electrostatic discharge (ESD) sensor for detecting an electrostatic discharge and converting said electrostatic discharge into a second sensor output;

an analog to digital converter coupled to said electrostatic sensor and said ESD sensor for converting said first and second sensor outputs to first and second digital data, respectively;

a data logger for logging said first and second digital data; and

means for attaching said data logger near a site of potential electrostatic discharge.

96. (New) The device of claim 95 further comprising an RF (radio frequency) communication module coupled to said data logger.